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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,523	08/25/2003	Naiyong Jing	56210US004	2281

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 04/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,523

Applicant(s)

JING ET AL.

Examiner

Ramsey Zacharia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/12/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. References C9 and C14 in the IDS filed 12 November 2003 have been lined through because copies of these references could not be found in the file.

Claim Objections

2. Claims 2-17 are objected to because they depend from claims that do not exist. It appears that the dependencies of claims 2-17 were copied from the parent application. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 6-8, 13, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Stoeppelmann (U.S. Patent 5,869,157).

Stoeppelmann teaches an article comprising a fluoropolymer layer, a polyamide layer, and a layer of an adhesion promoter (column 2, lines 33-50). The adhesion promoter comprises a polyamide and a diamine that may be a substituted or unsubstituted aliphatic diamine (column 2, lines 53-65). The diamine corresponds to the electron donor of the instant claims. The

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polyamide corresponds to the light-absorbing compound since it is capable of absorbing at least some light and the claims do not require a degree of absorption or wavelength(s) at which the absorption occurs. The fluoropolymer is a polymer comprising vinylidene fluoride, i.e. it is partially fluorinated (column 4, lines 27-30).

5. Claims 1-4, 6, 12-16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishii et al. (U.S. Patent 5,470,617).

Nishii et al. modifying the surface of a fluoropolymer by irradiating the surface in the presence of a UV-absorbing compound and a fluorosurfactant to improve adhesion (column 2, lines 15-30). The fluoropolymer may be perfluorinated or partially fluorinated (column 2, lines 35-47). The UV-absorbing compound may be an aromatic amine, i.e. an electron donor (column 2, lines 54-60). The fluorosurfactant may be an ammonium compound (column 3, lines 50-60), which would read on the light-absorbing compound in the instant claims. The treated fluoropolymer may be adhered to other resins or inorganic materials (column 5, lines 54-67), such as metal (column 6, lines 5-29).

6. Claims 1, 3, 6, 7, 10, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Vasta (U.S. Patent 4,495,247).

Vasta teaches a primer composition that has excellent adhesion to a variety of substrates and to which fluoropolymer coating compositions will adhere (column 1, lines 24-28). The primer composition comprises a fluorocarbon polymer, a metallic oxide, a pigment, and an amino alkyl alkoxy silane (column 1, lines 30-41). The silane corresponds to the electron donor

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of the instant claims. The fluorocarbon polymer, metallic oxide, and/or pigment correspond(s) to the light-absorbing compound since they are all capable of absorbing at least some light and the claims do not require a degree of absorption or wavelength(s) at which the absorption occurs.

The primer may be applied over a metal substrate (column 2, lines 56-61). In the embodiment of Example 1, a partially fluorinated polymer is used as the fluoropolymer coating (column 3, lines 46-63).

7. Claims 1, 3, 6, 8, 12, 14, and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Tannenbaum (U.S. Patent 5,562,991).

Tannenbaum teaches a primer layer for a non-stick coating that comprises a polymeric binder, a fluoropolymer, and an inorganic filler (column 2, lines 38-44). The primer may be applied to inorganic substrates such as metal and glass (column 2, lines 61-67). In one formulation, the binder comprises polyamic acid, triethylene amine, and both black and blue pigments (column 7, lines 56-column 8, line 10). In addition to the amine, polyamic acid also comprises amine groups, therefore they all reads on the electron donor of the instant claims. Black and blue pigments are light absorbing compounds. The non-stick coating comprises PTFE and PFA (column 7, lines 45-55).

Claim Rejections - 35 USC § 102 / 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 18 and 19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Stoeppelmann (U.S. Patent 5,869,157).

Stoeppelmann teaches all the limitations of claims 18 and 19, as outlined above, except for the exposing the adhesion promoter to actinic radiation. However, this is a product-by-process type of limitation.

The determination of patentability for a product-by-process claim is based on the product itself and not on the method of production. If the product in the product-by-process claim is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. Thus, when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. See MPEP § 2113. In this case, since the composition of the adhesion promoter reads on that of instant claims 18 and 19 (a combination of an electron donor and a light-absorbing compound), and it performs the same function (improving adhesion), the burden is on the applicant to demonstrate that the product of claim 18 differs from that of the prior art.

10. Claim 19 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vasta (U.S. Patent 4,495,247).

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Vasta teaches all the limitations of claim 19, as outlined above, except for the step of exposing the adhesion promoter to actinic radiation. However, this is a product-by-process type of limitation.

Since the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production and since the product of Vasta appears to be the same as that of claim 19 (a combination of an electron donor and a light-absorbing compound that improves adhesion), the burden is on the applicant to demonstrate that the product of claim 19 differs from that of the prior art.

11. Claim 19 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tannenbaum (U.S. Patent 5,562,991).

Tannenbaum teaches all the limitations of claim 19, as outlined above, except for the step of exposing the adhesion promoter to actinic radiation. However, this is a product-by-process type of limitation.

Since the determination of patentability for a product-by-process claim is based on the product itself and not on the method of production and since the product of Tannenbaum appears to be the same as that of claim 19 (a combination of an electron donor and a light-absorbing compound that improves adhesion), the burden is on the applicant to demonstrate that the product of claim 19 differs from that of the prior art.

Claim Rejections - 35 USC § 103

12. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeppelmann (U.S. Patent 5,869,157).

Stoeppelmann teaches an adhesion promoter that satisfies all the limitations of claim 9, as outlined above, except that the diamine is fluoroalkylamine.

However, Stoeppelmann do teach that the diamine may be a substituted or unsubstituted aliphatic diamine and the composition is designed to promote adhesion to a fluorinated polymer.

One of ordinary skill in the art would be motivated to use a diamine having a fluorine substituted aliphatic group to further enhance adhesion by making the diamine more compatible with the fluoropolymer to which it is to be applied.

13. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stoeppelmann (U.S. Patent 5,869,157) in view of Gillham et al. (U.S. Patent 3,309,425).

Stoeppelmann teaches all the limitations of claim 5, as outlined above, except for the inclusion of a phosphonium compound into the adhesion promoting layer. However, Stoeppelmann do teach that a variety of additives, including flame retardants, may be added to the adhesion promoter composition (column 3, lines 51-55).

Gillham et al. teach phosphonium compounds that are used as flame retardants in thermoplastic resin systems (column 1, lines 10-34). The compounds may be added in relatively small amounts and do not crystallize or oil out of the polymer system to which they are added (column 1, lines 35-53).

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One of ordinary skill in the art would be motivated to use a phosphonium compound described by Gillham et al. as the flame retardant because only a small amount is required and it will not crystallize or oil out of the polymer. Since the phosphonium compound would absorb light, it would read on a light-absorbing compound when added to the composition.

14. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tannenbaum (U.S. Patent 5,562,991) in view of Friedman et al. (U.S. Patent 5,908,704)

Tannenbaum teaches all the limitations of claim 11, as outlined above, except Tannenbaum does not include a vinyl silane in their primer composition. However, the primer is applied to glass and is designed to promote adhesion between the glass and a fluoropolymer.

Friedman et al. disclose the addition of a vinyl silane coupling agent to a fluoropolymer containing interlayer to improve the adhesion of the layer to a glass substrate (column 4, lines 35-48).

One of ordinary skill in the art would be motivated to add a vinyl silane to the primer composition of Tannenbaum to improve its adhesion to glass.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground

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provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

16. Claims 1-3, 5, 6, 8, 12, and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 6, 8-10, 14, and 15 of U.S. Patent No. 6,451,925. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of instant claims 1-3, 5, 6, 8, 12, and 13 represent a genus of which the inventions described by claims 6, 8-10, 14, and 15 of U.S. Patent No. 6,451,925 are species. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). The primary or secondary amine and onium catalyst of U.S. Patent No. 6,451,925 are species of the genera electron donor and light-absorbing compound, respectively.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Ramsey Zacharia', with a stylized flourish extending to the right.

Ramsey Zacharia
Primary Examiner
Tech Center 1700